

CLAIMS

What is claimed is:

1. A digitally imaged lenticular product comprising:

a lenticular lens having an array of lenticules defining a front surface, and a substantially flat back surface located opposite the front surface; and

5 a digitally output interlaced image joined to the flat back surface of the lens so as to be in correspondence with the array of lenticules.

2. The digitally imaged lenticular product of claim 1 wherein the interlaced image is printed directly to the flat back surface of the lens.

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3. The digitally imaged lenticular product of claim 1 where in the interlaced image is printed to a substrate and the substrate is attached to the flat back surface of the lens.

4. The digitally imaged lenticular product of claim 1 wherein the digitally output interlaced
15 image is created using a digital printing press.

5. The digitally imaged lenticular product of claim 1 wherein the digitally output interlaced image comprises a plurality of frames and each of the frames includes at least one individually customizable element.

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6. The digitally output interlaced imaged of claim 5 wherein the at least one individually customizable element comprises at least one of: a background image, a photograph, graphic art, a

graphic, typeface, text, a numeric code, an alphanumeric code, a logo, a bar code, computer-generated art, digital art, a vignette, a tint, dimensional art, a graph, a chart, vector art, a vector component, and a serial number.

5 7. The digitally output interlaced image of claim 5 wherein the at least one individually customizable element is versionable.

8. The digitally imaged lenticular product of claim 1 wherein the lens and the image are used as part of at least one of a container, a cup, a label, a package, a mousepad, a motor vehicle
10 license, and an identification card.

9. A digitally imaged lenticular product comprising a lenticular lens having an array of lenticules defining a front surface, and a substantially flat back surface located opposite the front surface and a digitally output interlaced image digitally printed and joined to the flat back surface
15 of the lens so as to be in correspondence with the array of lenticules, and wherein the digitally output interlaced image comprises at least one individually customizable element.

10. The digitally imaged lenticular product of claim 9 wherein the digitally output interlaced image is digitally printed directly to the flat back surface of the lens.

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11. The digitally output interlaced imaged of claim 9 wherein the at least one individually customizable element comprises at least one of: a background image, a photograph, graphic art, a graphic, typeface, text, a numeric code, an alphanumeric code, a logo, a bar code, computer-

generated art, digital art, a vignette, a tint, dimensional art, a graph, a chart, vector art, a vector component, and a serial number.

12. The digitally output interlaced image of claim 9 wherein the at least one individually
5 customizable element is versionable.

13. The digitally imaged lenticular product of claim 9 wherein the lens and the image are used as part of at least one of a container, a cup, a label, and a package.

10 14. A method for creating a digitally output interlaced image, the method comprising:
providing a lenticular lens having an array of lenticules defining a front surface, and a substantially flat back surface located opposite the front surface; and
digitally outputting an interlaced image, the interlaced image to be joined to the substantially flat back surface of the lens so as to be in correspondence with the array of
15 lenticules, and the interlaced image including at least one individually customizable element.

15. A digitally imaged lenticular product made by the method of claim 14.

16. A method for creating a plurality of digitally imaged lenticular products, the method
20 comprising:

providing a lenticular lens having an array of lenticules defining a front surface, and a substantially flat back surface located opposite the front surface;

digitally outputting a first interlaced image, the first interlaced image to be joined to the substantially flat back surface of the lens so as to be in correspondence with the array of lenticules, to create a first digitally output lenticular image; and

digitally outputting a second interlaced image, the second interlaced image to be joined to the substantially flat back surface of the lens so as to be in correspondence with the array of lenticules, to create a second digitally output lenticular image;

wherein the first digitally output lenticular image includes an interlaced image that is at least one of versioned and varied with respect to the interlaced image of the second digitally output lenticular image.

17. The method of Claim 16 wherein the providing step includes determining a lenticular lens resolution L according to the relationship $L = d/f$, where d is a digital printer machine resolution and f is a number of frames to be included in the interlaced image.

18. The method of Claim 17 wherein the lens resolution L is between about 10 and about 250 lines per inch (lpi).

19. The method of Claim 17 wherein the individually customizable element is integrated into at least one of the following multidimensional effects: flip, morph, depth, motion and zoom.

20. The method of Claim 17 further comprising incorporating the digitally imaged lenticular products as part of at least one of a container, a cup, a label, and a package.